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Rational Treatment

of

RUPTURE

By

DR. A. H. PARKER,

President of the Common Sense Truss Company.

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THE RATIONAL TREATMENT

—OF—

RUPTURE.

A STUDY OF THE

CAUSATION, PATHOLOGY, AND VARIETIES OF
HERNIA.

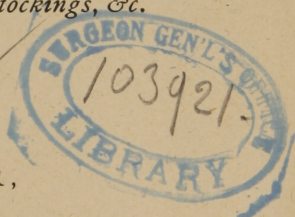
THE APPLICATION OF

Improved Modern Trusses, Elastic Stockings, &c.

BY

DR. A. H. PARKER,

President of the Common Sense Truss Co.



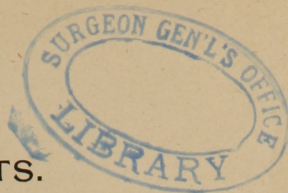
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INTRODUCTION.

There is no doubt the first ruptured man learned that relief was obtained by enough pressure being given by the hand to the affected part to retain the bowels in their normal position. This would naturally lead to some other method of obtaining that pressure as a substitute for the hand—thus developing some mechanical arrangement. These appliances, of whatever kind, are called Trusses.

The ruptured have relied on trusses for the relief and cure of Hernia for centuries.

Life Insurance Companies accepting the ruptured, make it an obligation to the applicant to wear a truss. In this case the interest of the Company is only a moneyed one, which must carry evidence of the importance of a truss. Therefore we can come to no other conclusion than that the "*Rational Treatment of Hernia*" lies in the perfection of the Truss and its proper application.

In part first I have endeavored to give to the professional man, as well as others, the late and correct anatomy of the parts in relation to each of the common species of Hernia or Rupture.

It would be well if the ruptured would study enough to learn the fact that charms, plasters, salves, electricity, curative compounds, and the whole category, are but sly methods to catch those who are ignorant of the true nature of rupture.

Probably there are few so ignorant, who, in case of a broken limb would seek a curative compound, salves, electricity, charm, or what not; but rather an experienced surgeon to secure its proper replacement and an appliance to retain the parts in their normal position, knowing that nature furnishes the curing process.

While a perfect fitting truss is essential to the safety and comfort of the ruptured, an ill-fitting truss is the bane of their lives and should not be countenanced a day.

In "part second" is illustrated and described the greatest improvement of the age in trusses. Instruction in the proper application of a truss, and the rational method of curing rupture; also the mechanical treatment of varicose veins.

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PART FIRST.

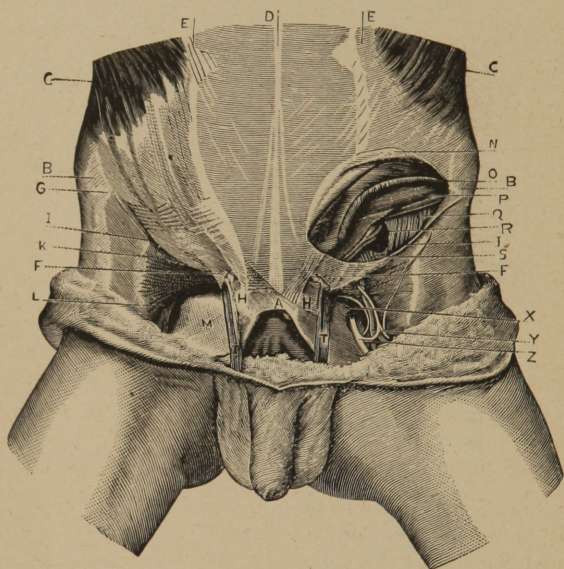


Plate I. is copied from Sir Astley Cooper's plate first, with his explanations, the illustration of femoral hernia being added. "This plate is intended to show the insertions of the external oblique muscles, the formation and location of the abdominal rings, and of two of the fasciæ which are connected with Poupart's ligament, as well as the course of the spermatic cord under the edges of the internal oblique and transverse muscles, before it reaches the abdominal ring."

EXPLANATION OF PLATE.

- a.* Symphysis pubis.
- b b.* Anterior and superior spinous process of the ileum.
- c c.* External oblique muscles.
- d.* Linea alba extending down to the symphysis pubis, and formed by the union of the tendinous fibres of the two oblique and transverse muscles.
- e e.* Linea semilunaris, formed by the union of the tendinous fibres of the external and internal oblique and transverse muscles.
- f f.* The abdominal rings, formed by the separation of two columns of tendinous fibres; the upper inserted at "*a*" into each os-pubis; the lower inserted into the pubes at "*h*," after passing behind the spermatic cord.
- g.* The origin of some tendinous fibres which proceed from the anterior spinous process of the ilium, and crossing the columns of tendon, assist in uniting them above the abdominal ring.
- i i* Poupart's ligament, or the crural arch, which is extended from the anterior spinous process of the ilium at "*b*" to the pubes at "*h*," receiving the lower column of tendon which forms a part of the abdominal ring, and which passes behind the cord to be inserted from the spinous process to the crest of the pubes.
- k.* The fascia lata of the thigh, which is continued from Poupart's ligament, and seen turning in under the femoral vessels near the middle of the fore part of the thigh.
- l.* The saphena major vein of the leg going through the fascia to enter the femoral vein.
- m.* Another part of the same fascia which arises from Poupart's ligament, and joins with the fascia lata, which it assists in forming.
- n.* The tendon of the external oblique muscle cut open to show the parts which are situated behind it.
- o.* The internal oblique muscle; its lower edge, which arises from Poupart's ligament, is raised and turned to show the parts behind it.

It is inserted into the pubes behind the upper column of tendon which forms the abdominal ring.

p. The transversalis muscle. Its lower edge also arises from Poupart's ligament, but is here raised and turned up. It, in its natural state, runs over the cord to be inserted into the pubes behind the abdominal ring, which it serves as a valve to close posteriorly.

q A fascia, connected with Poupart's ligament, which runs upwards to the transversalis, and unites itself to the posterior part of transverse muscle and its tendon, and thus prevents the bowels from slipping between the lower edge of the muscle and Poupart's ligament, or between the fibres of the muscle itself. That portion of the fascia which is placed between the spinous process of the ileum at "*b*" and the hole "*r*" is strong; but that between the hole "*r*" and the pubes is often little more than condensed cellular membrane, as that part is strengthened by the tendon of the transversalis, and by the epigastric artery. A portion of the fascia is fixed in the pubes, and another part of it passes behind Poupart's ligament to unite with the femoral vessels.

r. The place at which the spermatic cord goes into the abdomen. The fascia situated on its outer side and lower part is of considerable density, but becoming thin upon its inner side, so as to show the epigastric artery and vein behind it; from the edge of the fascia a thin layer is sent off, which unites itself to the spermatic cord, which fascia in this dissection has been removed.

s. The epigastric artery and vein, situated behind the fascia transversalis, at first on the inner side, and afterwards behind the spermatic cord. The epigastric artery is shown here by cutting the fascia transversalis parallel to it.

t t. The spermatic cord, nearly two inches of which are above and to the outer side of the abdominal ring, and still not in the abdomen; it is also seen below the ring, running to the testicle.

x. The saphenous opening.

y. Femoral artery as located under the vein.

z. Femoral vein.

THE
RATIONAL TREATMENT OF RUPTURE.

A STUDY OF THE

*Causation, Pathology, and Varieties of Hernia, and
Improved Modern Trusses.*

In the following pages (part first), addressed to the medical practitioner, we desire to offer some practical hints on the best means of securing and applying good trusses, and to urge the importance, both to patient and physician, of a more careful supervision of this neglected matter.

So universal and prevalent is this affection, and so imperative the call for treatment when it does occur, that no duty would seem more exclusively a professional one than that of adjusting proper apparatus for its relief; yet, no duty, perhaps, is more frequently neglected, practitioners assuming too often that any truss recommended, or which has helped some one, will be suitable to any case.

The generic term *hernia* is used to denote the protrusion of any organ from its containing cavity, as hernia of the lung, of the brain, of the iris, or of the stomach, omentum, or intestines.

The specific term *rupture* is applied only to abdominal hernia.

These viscera are more subject than any other to hernial protrusion, on account of the complex and thin-walled cavity in which they are contained, and on account of the pressure to which they are subject, and their great mobility.

Types and Varieties of Hernia.

Some writers have classified ruptures according to their contents, or, in other words, the organs displaced (enterocele, epiplocele.)

For purposes of description they are best divided in reference to their road and manner of exit from the abdomen, thus giving rise to the species known as,

1. Inguinal Hernia, (scrotal).
2. Femoral " (crural).
3. Umbilical " (exomphalos).

These are the usual varieties and are of such common occurrence as to call for much more study and consideration than those rarer and exceptional cases known as *ventral*, *diaphragmatic*, *thyroid* and *perineal hernia*.

Causation of Hernia.

Inasmuch as a rupture must be referred to one of two causes, viz., unusual pressure from within, or insufficiency of abdominal walls—a variety of causes will serve to explain how one or the other of these two elements is most active.

The *producing* cause usually is some act of "straining" such as takes place in lifting, coughing, vomiting, or while at stool. It is during such acts, as a rule, that the actual *breach* or yielding occurs, and is recorded by the sensations of the patient.

The peritoneal sac, which of itself is insufficient to withstand any strain, depends at all points upon the support of the muscular and tendinous fibres of the abdominal wall. The proneness of these fibres to yield to internal pressure is a chief element in the formation of abdominal hernia of the several types. As has long been known, this yielding commonly takes place at certain weak spots, caused by the exit of large vessels, the spermatic cord, etc.

It is not now believed that laborious *occupations* steadily pursued have any tendency to produce rupture. Even among gymnasts figures do not show that this injury occurs with greater, but rather with less than average, frequency.

On the other hand indolent or sedentary *habits* do predispose the individual to that so called "laxity of fibre" which causes rupture to take place on any sudden exertion. *Wasting diseases* are invoked as predisposing causes also, and without doubt, truly. Anemia and all atrophic affections weaken the supporting walls.

On account of the fluid and gaseous nature of the contents of the abdominal cavity, pressure is distributed uniformly over its entire internal surface. Hence, if any weak spot exists by the side of some vessel or at some other natural outlet, the movable bowels or intestines have a tendency to thrust themselves outward and form a pocket or pouch, and once formed such a pouch has an inevitable tendency to dilate, pushing the surrounding tissues in all directions. Constant pressure soon produces absorption of tissue, which cannot be displaced, as is well shown in the effects of aneurisms even upon bone. Hernial tumors, therefore, as a rule, continue to enlarge unless checked or cured by surgical or mechanical interference.

Sex and age have much to do with the frequency and severity of this affection. There are many more cases of rupture among men than among women. The same is true of dislocations and fractures as well as most other surgical injuries. This difference, however, may have been overestimated since the statistics come mainly from those who furnish trusses (notably the London Truss Company), where men would naturally outnumber women in applications. Females would, for the most part, receive attention at home, or remain without treatment.

In women below the age of maturity and in men of all ages inguinal hernia is most frequent. In adult life women are much more subject to femoral hernia on account of the greater relative size of the crural arches from the wider expansion of the wings of the ilea.

Peculiar causes predispose the male infant to the occurrence of inguinal rupture, and also give rise to certain peculiarities of the affection known as *congenital* and *infantile hernia*.

At the eighth month of foetal life the testes descend from the abdomen to the scrotum, carrying before them a pouch of peritoneum, which soon becomes separated from the general cavity, forming about the gland its *tunica vaginalis testis*, and leaving the canal of descent impervious.

When from any cause developmental changes have been retarded, two forms of hernia may be produced—

1. When the testis has been followed into the scrotum by a loop of the intestine before the closure of the canal has taken place, the two organs are found in the same cavity. This is termed *congenital hernia*.

2. When this canal is closed by nature, before the descent of the bowel, the latter does not lie in contact with the testicle, but in a separate sac of peritoneum, forming *infantile hernia*.

Anatomical Characters of Hernia.

Every hernia is invested by a serous covering called its sac, which is formed by a process of peritoneum carried outward from the inner surface of the wall of the abdomen.

The component parts of a hernia are therefore,

1. The contents.
2. The sac (serous).
3. The coverings.

The *contents* of a rupture vary somewhat. The ileum or lowest section of the small bowel is most frequently found. In some cases the large intestine, in others the omentum, is present. Whether intestinal or epiploic the contents of the hernia are in free communication with their contiguous organs above, so that all functions of the parts are carried on as if in their natural location. In recent cases the contents of a hernial sac are movable and easily returned. In a few cases the contents finally become attached by adhesions or bands of organized lymph to the serous sac, so as to be irreducible. This gives rise to the forms known as *incarcerated* hernia.

The hernial *sac* is a peritoneal pouch having a main portion or body and a narrower constricted portion called the neck. The sac is occasionally found multiple. Certain viscera (cæcum, bladder,) which are only partially invested by the peritoneum, may be wanting in this serous envelope when they occur in the hernial tumor.

The neck, or that portion of a hernial sac lining the abdominal opening, is important both in reference to prognosis and treatment. In direct inguinal and in umbilical hernia it is short and annular. In indirect or oblique inguinal and in femoral hernia it is tubular, flattened or funnel formed.

The neck of the sac is the region involved in the operations for the relief of strangulated rupture and in all operations or treatment for radical cure.

The *body* of the sac is spheroidal, pear-shaped or irregular in form. Its internal serous surface is in contact with the displaced viscera and communicates freely with the general peritoneal cavity.

The external surface is commonly united to the surrounding parts by a tissue, cellular and light in recent cases, hard and dense in older ones.

Occasionally these adhesions do not form and the sac and contents of the rupture may both be reduced. This circumstance is found greatly to favor a radical cure.

The *coverings* of a hernial sac vary somewhat in the different varieties. Their nature is best seen by an examination of the differ-

ent layers of tissue through which the rupture has made its way. The fibres of the external oblique tendon as they approach the pubic bone diverge slightly near their insertion so as to form an opening for the transmission of the spermatic cord. This aperture, which is triangular in form, is the *external abdominal ring*. Its edges are termed the pillars of the ring. Where these pillars of tendinous fibres divide above the ring, they are strengthened by a layer of cross bands, called the intercolumnar fibres. These extend more or less over the opening forming the intercolumnar fascia, one of the coverings of an inguinal hernia. Across the external ring, and closing its aperture lies the next plane of tendinous fibres—the conjoined tendon of the internal oblique and transversalis muscles. Between this tendon and that of the external oblique the spermatic cord passes in a direction upward and outward above Poupart's ligament. The space traversed by the cord before penetrating the abdominal wall is called the *inguinal canal*. Its length is one and three-quarters inches. At its upper and deeper termination it opens into the abdomen through the *internal abdominal ring*.

Figure 5.

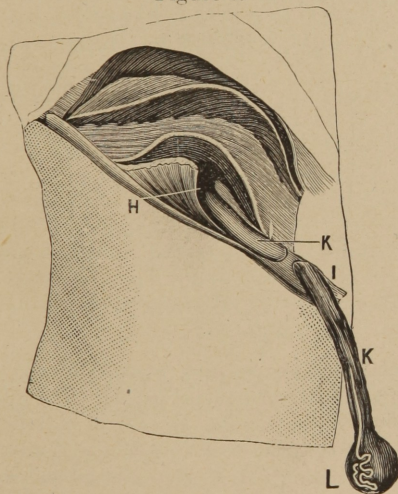


Figure 5 represents a section of the body—right side.

- h.* Internal abdominal ring.
- i.* External abdominal ring.
- k.* Spermatic cord.
- l.* Testicle.

In case of an oblique inguinal hernia (see figure 5) the mouth of the hernial sac or commencement of the hernia would be at *h*, neck of the hernial sac would extend from *h* to *i*. After the hernia passed the external ring at *i* the body of the hernial sac would begin.

In the normal condition the inguinal rings and canal are of such size only as to allow of the passage of the cord through them, but in cases of rupture they become very greatly dilated.

At the time the testes descend in foetal life, the apertures of the two rings coincide approximately, so that there is in reality no canal, and but one opening. No sooner has this stage passed, however, than the posterior layer of aponeurosis begins to move outward, interposing between the intestines and the external ring the firm fibres of the conjoined tendon.

The provision against inguinal hernia consists in this valvular arrangement of the two tendons, they being (so to speak) slipped past each other so as mutually to close the two openings of the rings. Thus the internal abdominal ring is blocked by the tendon of the external oblique, the external ring by the conjoined tendon of the internal oblique and transversalis.

Figure 4.

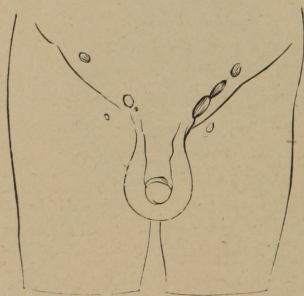


Figure 4 represents the relative position of the different openings involved in inguinal and femoral hernia. The upper opening on the right side is where the hernia, in case of oblique inguinal, first quits the abdomen, thence between the abdominal muscles or through the inguinal canal, passing out of the external abdominal muscle at the lower opening, entering the scrotum by the side of the spermatic cord. The left side shows the oblique course the rupture takes, usually not noticeable until it passes through the external abdominal ring. The openings below the lines representing the groin, designate the locality of femoral hernia.

Figure 3.

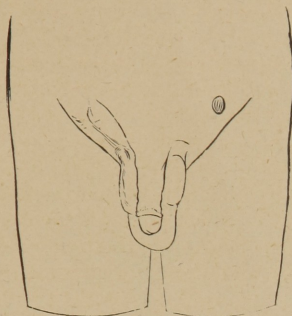


Figure 3—the right side represents oblique inguinal hernia, the left side direct inguinal hernia; also the locality of the internal abdominal ring.

It is obvious from this study of the anatomy that inguinal ruptures may take either of two routes in their escape from the abdomen.

(1) Through the internal ring by way of the inguinal canal and thence out of the external ring. This constitutes *oblique inguinal hernia*.

(2) Through the conjoined tendon and external ring. This is the manner of exit of a *direct inguinal hernia*.

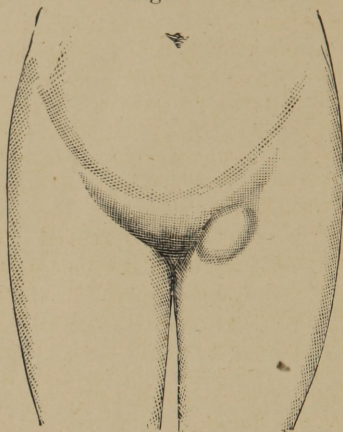
The above-mentioned tissues are the most important coverings of the hernial sac at its neck. The coverings of the body of the sac are mainly to be looked upon as processes from the various layers which surrounded it at its neck.

In the oblique inguinal hernia there are beside the serous membrane and subserous fat: (1) Transversalis fascia (derived from the layer behind the transversalis muscle). (2) Cremaster (an extension of the internal oblique. (3) Intercolumnar fascia. (4) Fat or superficial fascia. (5) skin.

Direct inguinal hernia is invested by the same layers except that the cremaster is replaced by a layer derived from the conjoined tendon.

Femoral Hernia.

Figure 6.



Femoral hernia is that form in which the intestine finds exit beneath the crural arch (Poupart's ligament) and appears superficially at the saphenous opening on the front of the thigh.

The latter opening is covered by a thin layer of fibres called the cribriform fascia which forms one of the coverings of a hernial sac.

From this opening the crural canal passes upward along the inner side of the femoral muscles to an opening into the abdomen called the *femoral ring*, just outside of Gimbernat's and below Poupart's ligament.

This opening is closed by a layer of fascia called the *septum crurale*. The function of this aponeurosis is to prevent the occurrence of hernia, but when it does occur it forms one of the coverings of the sac. These are, (1) Septum crurale. (2) Crural sheath. (3) Cribriform fascia. (4) Fat. (5) Skin.

Course and Prognosis.

Below the age of puberty ruptures have a tendency toward spontaneous recovery if kept reduced. In view of this fact the extreme importance of supplying a ruptured child immediately with a proper truss is too obvious to need comment. Admirable forms of children's trusses are now constructed and will be more particularly mentioned later on.

No case of hernia in a child should be allowed to go unsupported for an hour. Let the surgeon see that all such cases are at once reduced, and if necessary, held by bandages until a suitable truss is obtained. In many cases the small size of the hernial tumor, together with the absence of pain and other subjective symptoms, or perhaps occasionally the dictates of expediency in the mind of an easy-going doctor, lead to the dangerous assumption that delay is unimportant so long as the child is young and not active. This is a dangerous error, for while the rupture is down, even if not increasing in size, it still is moulding the parts into their new relations and diminishing each day the chances of permanent restoration.

In adults there is no such marked tendency to recovery, yet a certain percentage even of these cases will be cured permanently while wearing an effective truss properly adjusted, such as Dr. Parker's Retentive Truss, the principle of which is a new one, a departure from any hitherto in use and a late and marked improvement on the Parker Common Sense Truss adopted by the United States Government as the best in use, for illustration and explanation of which see Part Second.

Rupture is a great bodily ill of the human family. It pervades all classes of society, from the high to the low, the Emperor upon the throne, the professional man at the bar or pulpit, the literary man with his sedentary habits, the merchant at his business, as well as the mechanic, farmer, miner and laborer, with their hard laborious work.

The late war for the suppression of the rebellion, shows through the pension office a list of some ten or twelve thousand which now, through the generosity of the Government, are each supplied every two years and six months with The Parker Common Sense Truss.

The daily press constantly chronicle the death of loved and respected citizens, statesmen and millionaires, from Strangulated Hernia, while in the prime of life. Should this not attract the attention of the medical fraternity of the whole country in tracing the cause of this scourge to its proper source, studying its prevention and devising proper and specific means of curing, or at least alleviating Hernia? Should Hernia be passed by as of trivial importance? Sir Astley Cooper, in his great work on hernia, says, "A person under these circumstances (without the rupture being properly retained) lives in constant danger, as numerous accidental causes may produce strangulation of the prolapsed intestine, the consequence of which will be fatal unless early and well-directed skill be employed."

The evil should be corrected on its first appearance, as in the majority of neglected cases the apparently innocent hernia develops dangerous symptoms, destroying man's true manhood, and often proving fatal. Yet it is frequently the case the sufferer is persecuted by ill-fitting and poorly constructed trusses, which become instruments of torture instead of curing or alleviating the difficulty; the improper bearing enlarges the opening, the tumor increases in size and becomes much more difficult to retain, and shows signs of strangulation; the spermatic cord enlarged, the circulation cut off from the testes, which become dwindled and sexual power impaired. This is not all; the kidneys become deranged, bowels irregular, back weak, hips lame. In the endeavor to make the worthless instrument more secure, it is strapped around the body so tightly the lower extremities become numb and almost paralyzed. The mind not being free from anxiety, unfits him for business; ambition and energy almost gone, he is peevish and fretful, and feels everything but a happy and contented man; and unless relief is received, drags out a miserable existence. Much mischief results from imperfect trusses. Trusses are not like clothes, in which nicety of fit is not a matter of essential importance. The proper adjustment of a truss is itself an art requiring both science and skill. The treatment of hernia mechanically has been our specialty for many years, and by our scientific adjustment of trusses is largely to be attributed our success in permanently curing a majority of cases which apply to us for treatment. We will say right here, that that knowledge and experience can only be made useful in adjusting trusses that have some adjustability, and that under the control of the party adjusting the instrument, and permanency when the proper adjustment is attained, all indications which are met by Dr. Parker's Retentive Truss.

When ruptures are left alone or ineffectually held back, the course of the affliction is toward greater and greater increase in the size of the sac, further and further protrusion of the viscera from the natural cavity, until in neglected cases nearly all the movable organs of the abdomen fall down into the hernial pouch, and the worn-out patient dies miserably of inflammation, gangrene or exhaustion.

Fortunately at the present time very few cases are allowed to go on to such a termination, yet it is not rare for them to attain enormous dimensions even now from ineffectual treatment or from neglect.

The case of the historian Gibbon, whom Sir Astley Cooper tried

to save from the consequences of a neglected rupture, is thus related by the great surgeon—(*Cooper on Hernia, London, 1804*):

“Mr. Gibbon had been for thirty years subject to a scrotal hernia on the left side, of which he made no complaint, and to which he applied no remedy to prevent its increase; but in the Summer of 1793, finding it grew suddenly uneasy, he became alarmed and consulted Sir Walter Farquhar and Mr. Cline. The tumor was then of uncommon size, reaching to his knees, and very large at its connection with the abdomen. As some water was perceptible at the lower part of the tumor, it was tapped in the month of November, 1793, and a large quantity of water was drawn off. In a fortnight after it was again tapped, and three quarts of water were evacuated, without any very sensible diminution of the swelling. Six weeks afterwards, the skin over the tumor having inflamed, and shown a disposition to ulcerate, the tapping was again repeated January 13, 1794, when six quarts of water were discharged. Two evenings afterward he began to complain of pain in his stomach and soreness in the abdomen and in the tumor on pressure. He passed the night restlessly, but the next morning when he arose, he seemed in better health and spirits than usual. Soon after he became insensible, and expired about eleven o'clock.”

At the autopsy the surgeons found that all the intestines except the colon and duodenum had emptied themselves into the enormous cavity of the hernial sac, whose orifice was so large as to admit the hand, and whose lower portion reached the level of the knee.

Another case which the writer was called upon to examine in consultation with a prominent physician of Chicago, was of extraordinary interest as showing the size to which an umbilical rupture may attain. The hernia was incarcerated, irriducible and of long standing. As might have been anticipated, it became strangulated and proved fatal in spite of operative interference. Post mortem examination showed that almost all the abdominal organs had made their escape into the hernial sac, which was multiple and so complex that some parts had been relieved by the operation, while others remained strangulated.

Femoral ruptures are not known to attain the enormous size to which scrotal herniæ grow. This fact does not render them less serious, however, but rather more dangerous, since, being less inconvenient and noticeable, they are frequently neglected. Women, who are more often affected by this form of the trouble, are less called upon to do severe work, and so feel the need less, perhaps, of some

apparatus for support. This—with other reasons—cause them to neglect proper treatment to an alarming extent.

It should be the care of every physician that any such case under his control should at once be fitted with a reliable truss *under his personal direction*, and the patient be warned of the dangerous and perhaps fatal consequences of neglect. The Parker femoral trusses, described on a subsequent page, leave little to be desired in ease of wearing and certainty of retaining the rupture, while allowing perfect freedom of every kind of movement.

Diagnosis and Symptoms of Hernia.

The signs of the various kinds of rupture vary, of course, in certain respects, but all forms have general diagnostic features in common.

The first and most positive symptom by which we are able to differentiate a hernial tumor from any other is *succussion* or “impulse” on coughing.

A *bubo* or similar glandular swelling in the inguinal region never gives successive distension, although it may be shaken or jarred when the patient is directed to cough.

A *lumbar abscess* pointing in the groin is more frequently mistaken for hernia. The tumor often gives a certain kind of impulse to the hand, because the fluid it contains communicates above with a collection of matter very near or within the abdominal cavity, though retroperitoneal. I have known an inguinal tumor supposed to be a rupture to yield several pints of pus upon tapping with the aspirator.

A small aspirator needle is, in fact, a valuable means of diagnosis in doubtful cases of this sort. It also aids greatly in reducing by taxis some cases of strangulated hernia by drawing off the flatus and serum, and diminishing the size of the tumor. The fact that a rupture is reducible serves to distinguish it from the pointing of an abscess, which develops great tenderness on handling and cannot be made to disappear.

The antecedent history will also serve very clearly to separate the two affections.

Resonance on percussion is usually a characteristic of a hernial tumor, dullness or a flat percussion note of all other swellings here found.

On palpation a hernia has the peculiar feel called “doughy.” It seldom fluctuates like an abscess or hydrocele, and is never hard like a tumified inguinal gland.

Auscultation yields a gurgling sound of peristaltic movements when much of the bowel is present.

Enlargement of a testicle and *hydrocele* are excluded by the absence of a neck, and the latter also by its translucency in sunlight or strong artificial light.

The rarer form of dropsical effusion known as *hydrocele of the cord* much resembles an inguinal hernia, and may need the aspirator needle to settle its identity, but even here the diagnosis is not often in doubt.

In practice it is certain that the surgeon will not fail to make a diagnosis of any rupture if he is patient and thorough in using the means at his command. Errors will only occur in hasty or off-hand diagnosis, based on superficial resemblances or imperfect examinations of the available facts.

It is well known that persons have been taken sick and gone on to a fatal termination from a strangulated hernia of whose very existence the attending practitioner remained ignorant while applying treatment for some other supposed affection; and it is not to be forgotten that a rupture may exist without external prominence enough to attract much notice. This fact should be remembered in connection with the possible presence of umbilical hernia, and, in corpulent individuals, of all hernia.

In March, 1880, Dr. Parker was called to visit a Mrs. B. on West Monroe street, Chicago. The patient was suffering with persistent and uncontrollable vomiting, accompanied by constipation, under the care of her family physician, who had diagnosed the case bilious colic. Medicine having no effect, he had called in other physicians to council without discovering the true state of the case. The fact was, Mrs. B. was suffering with strangulated umbilical hernia, treatment of which having been so long delayed, failed to yield under the experienced hand of Dr. P., although the taxis was applied persistently for two hours. In the meantime the family physician came, but he proved to have such limited experience—the patient being very fleshy—could discover no rupture. Although advised to call a surgeon and warned of the consequences of a delay, he persisted in his treatment for some thirty hours, when, Prof. Andrews being called to operate, six inches of bowel were found incarcerated and mortified. The patient's terrible suffering soon ended in death.

The mere fact of persistent and uncontrollable vomiting, accompanied by constipation, should incite the physician to satisfy himself that a strangulated intestine is not at the bottom of the trouble. No

other line of action can be marked out until this question has been settled.

Treatment of Rupture.

Of the operations for the radical cure of rupture little can be said, except that efforts have been made from time to time with various surgical operations, but so general have been the failure that it is scarcely necessary to mention them. Treatment by well-made and well-adjusted trusses is at present the plan to which those afflicted must look for relief, and for whatever hope of permanent cure the nature of their individual cases will warrant.

The first important doctrine in relation to trusses is one which will be readily assented to, viz., that each instrument, like a well-fitted garment, should be adjusted and adapted to the particular individual by whom it is worn. It goes without saying, if this be true, that only a surgeon or a truss-maker is a competent person to apply such apparatus; aye, still better, a competent person making the adjustment of trusses a specialty. The mechanic cannot be a good workman at both painting and carpentering. Even the painters have their specialties—portrait, landscape, graining, sign-writing, &c. A person making the adjustment of instruments a specialty, who thoroughly understands the anatomy of the parts, becomes an expert in the shaping and application—that part being a mechanical operation—as well as by the large field of experience; the touch becomes so delicate that scarcely an error in diagnosis would occur through his hands. As an illustration, a worthy and intelligent young man, Mr. B.—deceased a number of years—having been with Dr. Parker some nine years, a greater part of the time assisting in the office in applying trusses, was spending a few weeks in a small village in the interior of Kansas, recruiting his health. One of the physicians of the place having a supposed case of strangulated hernia, requiring an operation, invited Mr. B., with another physician of the place, to accompany him to see the operation. Each one of the Doctors having carefully examined the patient, and everything being ready for the operation, Mr. B. was invited to examine and see what he thought of the case. Those fingers had had years of experience, and scarcely required a moment to diagnose the case. It being an abscess forming, and no rupture, his suggestions were taken by the doctor, and the operation deferred, saving the doctor from an egregious blunder.

It is the special purpose of this article to set forth in a clear light the author's honest belief that this matter of the application of

trusses ought not to be in the hands of those who have not given the study of rupture especial attention. The whims or prejudices of a patient, or his crude ideas of what is needed for his case, are seldom reliable guides in the selection of a truss which must be worn for years. Still less can pharmacists be expected to supply that knowledge of the anatomy and pathology, and that professional authority here so essential.

To give to a suffering patient the vague prescription, "Go to the druggist and buy a truss," is little short of listlessness in a physician, who thereby forfeits a kind of professional service for which he can justly claim fair compensation. By proper forethought, the profession could thus reserve to its own members a professional duty which now frequently goes by default to druggists, who are not always well qualified to perform it. How much better, also, for the patient to secure under professional guidance a reliable and well adjusted instrument, rather than trust dealers whose motives are mainly commercial. How often the druggist, through ignorance of the requirements of a truss, fill up their stock with worthless trusses; yet they feel it to their interest to sell them.

Extract from Dr. George Heaton's work, "Cure of Rupture": "There are found in the market many styles and patterns of trusses, known by various special names, which we have not the space to describe. I myself most frequently make use of the 'Common Sense Truss,' so called, or of some modification of it. This truss is also exclusively used by the United States Government."

In examining the stocks of druggists in general, the writer is often astonished at the trash accumulated called trusses, largely with cheap, ill-shaped springs, scarcely long enough for a good-sized youth, with a pad and sheath large enough for a large person, the pad not suitable for a youth, and the spring a worthless article for an adult; or, perchance, some adventurer has passed along with some worthless elastic or belt truss, "more dangerous," quoting Sir Astley Cooper, "than a total omission of that kind of a support." Should an instrument of superior worth be presented at its cost, or less, they would not purchase, for they must sell what they had in stock, or otherwise would find no sale for their worthless trusses.

The enormous prevalence of rupture is one of the most startling facts in pathology. "Not less than one in fifteen adults in the United States is afflicted with some form of hernia" (Agnew), and at some periods of life it occurs with still greater frequency. If we stop to consider the vast amount of misery which may be entailed by neglect

or by imperfect treatment in this widespread affection, we cannot fail to be impressed by the serious need of watchfulness that cases do not go on under our eyes to any of the advanced stages.

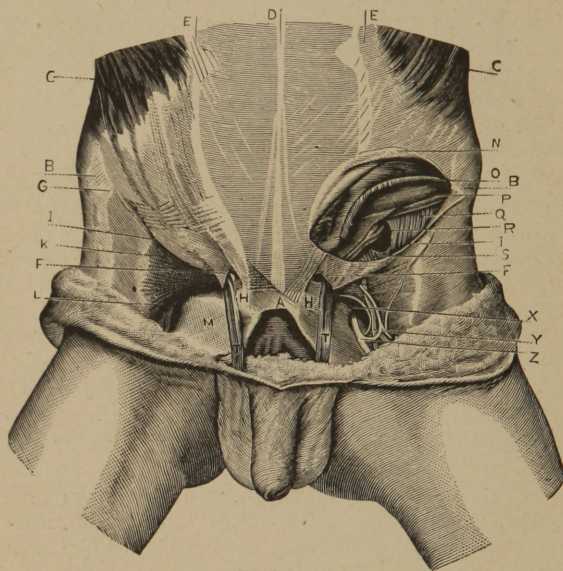


PLATE 1.

F—External ring.
R—Internal ring.

F R—Inguinal canal.
T—Spermatic cord.

In the application of a truss to an oblique inguinal hernia, the fact should be recollected that the first point of exit from the abdomen is the internal abdominal ring.

The “Parker Retentive Truss” claims the advantage over all other forms of blocking this orifice primarily, and not merely making a general pressure over the external ring and inguinal canal. The design is that the intestine shall be prevented in any degree whatever from escaping, which is the nearest approach to a normal condition.

To find the internal ring in case it is not readily felt through the skin, take a point half an inch above Poupart’s ligament, and midway between the *symphysis pubis* and the interior superior spinous process of the ilium. In old ruptures it is often dragged toward the median line, so as nearly to coincide with the external ring, but wherever it be found it should be covered by the pad of the truss,

Copy of plate 3 of Sir Astley Cooper's Great Work on Hernia, leaving out the display of dissection and adding a double truss.

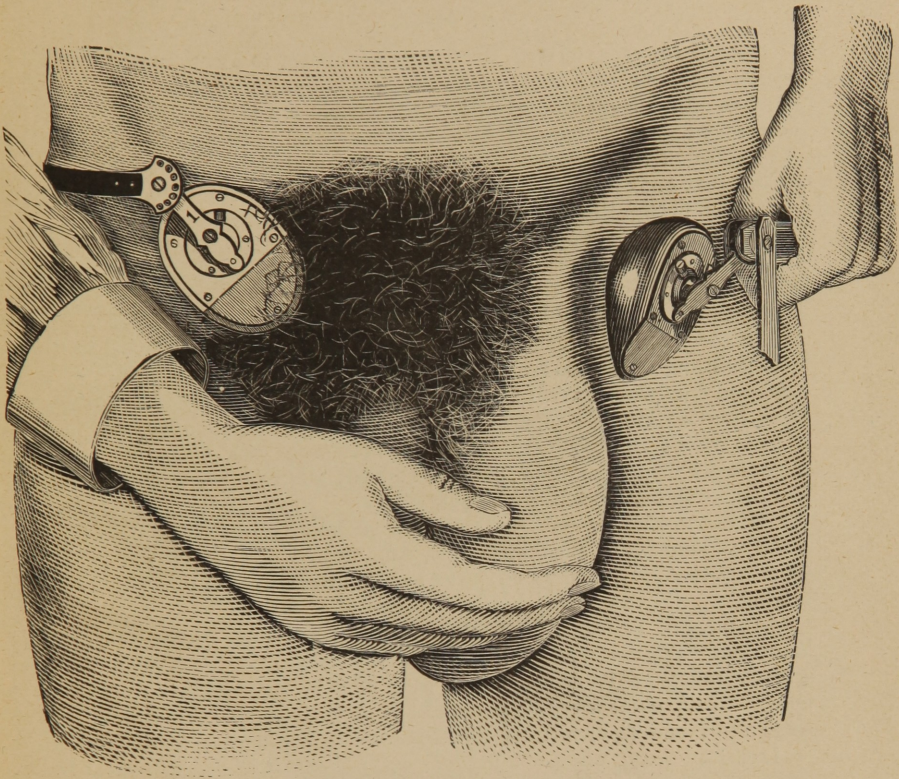


FIGURE 99.

The Pad being held on the left side in position to reduce the large rupture and give an idea of the shape of the pad prominent at the upper part, giving the greater pressure where dissection shows the rupture first quits the abdomen. The pad is given the angle of the inguinal canal and made firm in that position. The rupture can only strike the pad on the top part, forcing it in the direction the rupture takes in passing down, and can move the pad but little without stretching the spring, a resistance never brought to bear in a truss before, the rupture forcing the pad downward only, while in other trusses the force is outward, almost a right angle difference. The silk sheath is removed on the right side to show the attachment of the pad to the spring.

The above is but a passing glance at only one of its merits of adjustment. It will be more fully explained in part second.

Frequency of Hernia According to the Race of Man.

As to the races of men, there does not appear to be any proper reason why one race should be more exempt from rupture than another. Intelligent study leads to the conclusion that the sitting posture which the more civilized races generally assume is the chief cause of the frequency of this painful affliction. It is estimated that one out of fifteen among the whites are ruptured, the proportion being rather larger among the blacks. On the other hand, among the Indians rupture is almost unknown. As the Indian never sits on any object, and knows nothing of stools or chairs, but when resting squats on the ground, the muscles in the inguinal and femoral regions, or lower part of the abdomen, are developed and made strong by continual exercise from childhood. Those muscles being developed from generation to generation, there is no inherited weakness. With the whites and other races that practice the sitting posture, those muscles are kept weak and delicate, and liable to yield when subjected to more than usual pressure. The Indian engages in the chase and other violent exercises, while his squaw lifts and carries heavy burdens with equal safety.

Let us not, therefore, wrongfully charge nature with leaving the lower part of the abdomen weak and unprotected, but rather confess that some continued wrong habit has debilitated that which was originally strong, as it is in aboriginal man.

It must be admitted that whatever has a tendency to render man weaker physically would of course effect that part of the body where ruptures are liable to occur in proportion to other parts of the body. Again, climate has its influence, as it is noticeable that ruptures occur more frequently in warm climates than in temperate and cold regions.



Part Second.

Trusses — Advantages and Defects.

It seems that truss makers have always been determined to make trusses for inguinal hernia so that they can only be applied at the external abdominal ring, and indeed it is the frequent failure of the purpose for which they are designed, when made according to this principle, that has led to such variety in the mode of their construction.

Sir Astley Cooper says, in his great work on hernia: "The object in applying a truss is to close the mouth of the hernial sac, and destroy its communication with the abdomen; and this object can never be perfectly fulfilled by any truss which is applied upon the external abdominal ring. In this case the cure must be incomplete, because a considerable portion of the hernial sac remains uncompressed towards the abdomen, which is that situated between the abdominal ring and the opening of the sac into the cavity of the belly." Again: "Nor is this all the mischief that attends this practice; for the pressure of the spermatic cord by the truss against the os pubis frequently occasions great pain, to relieve which the patient is constantly shifting its situation and destroying its effect, and often the tests themselves become wasted by the interruption of the passage of the blood along the spermatic vessels."

The term "rupture" is wrongly applied. The older surgeons thought that hernia was formed by a laceration of the peritoneum and abdominal muscles, which gave rise to the term rupture, but dissection has proved that such a rupture of the membrane scarcely ever happens. Rupture, therefore, denotes some protrusion of the contents of the abdomen, which usually takes place through some natural opening in the walls of the abdomen, and is caused by some strain forcing the thin membrane lining the walls of the abdomen, which form a pouch or covering of the protruded parts, and is the hernial sac so often mentioned. This membrane, in forming the hernial sac, is not dragged from its natural situation, but becomes

elongated by gradual distension. This membrane has a quality of distending as the abdomen becomes larger, if there is a force to distend it. The membrane has also the quality of contracting, the abdomen becoming smaller as the force is removed that distended the parts.

In order that the preceding quotation may be readily understood by persons not versed in the anatomy of the parts, or in the medical phrases, the following cut is used to illustrate :

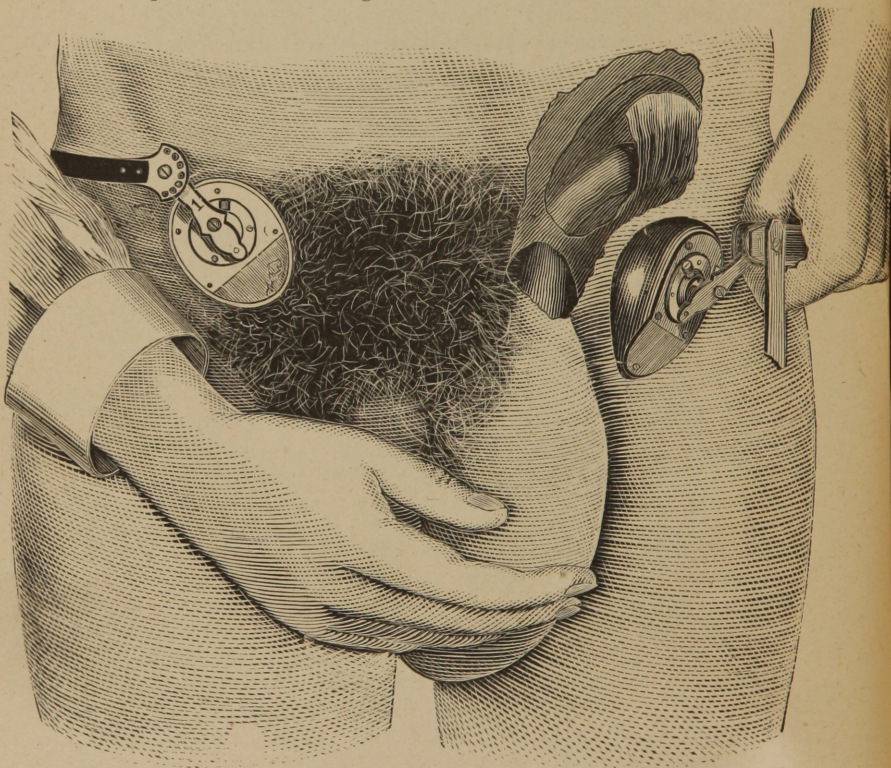


FIGURE 100.

By examining the cut (figure 100), you will understand there is an upper opening where the hernial sac first quits the abdomen, as shown by dissecting the external muscle from the parts. The neck

of the sac extends from the upper opening through what is called the inguinal canal, until it passes the external opening as shown, which is an opening passing through the external muscle. The protruded parts are so firmly clasped by the external and internal muscles that the distension of the hernia in most cases is imperceptible until the hernia passes through the external abdominal ring. The body of the sac begins to form after the passage through the external abdominal ring, and gradually distends into the scrotum. You will now understand the following quotation from Cooper on hernia: "Therefore, when a hernia has been returned by the surgeon into the abdomen, he should lay his fingers obliquely above and to the iliac side of the ring and direct his patient to cough; and the farthest part from the ring towards the spine of the ilium, where the hernial sac is felt to protrude, is the point which should be noted for the application of the pad of the truss, and the instrument made accordingly."

Therefore, if it is so essential in applying a truss to find the source of the protrusion, and that place noted for the application of the pad of the truss, trusses should certainly be so constructed as to admit of the adjustment of the pad of the truss at that particular place. Aye, why should not the greater pressure be given at that very spot? This is just what is accomplished by the "Parker Retentive Truss," and never attained by any truss before.

The following illustrations will give a vague idea of the construction of the truss:

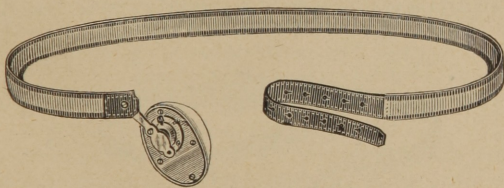


FIGURE 13.

Parker Retentive Truss.

Patented July 9th, 1878—Automatic Joint patented March 6th, 1883.
Gold-plate Pad, Plate, and Neck; Ivory Pad, Silk Cover.

The principle of adjustment is a new one.

Dr. Parker proposes to give \$100 for the production of any case of inguinal or scrotal hernia that can be retained by the hand that he cannot retain with the "Parker Retentive Truss."

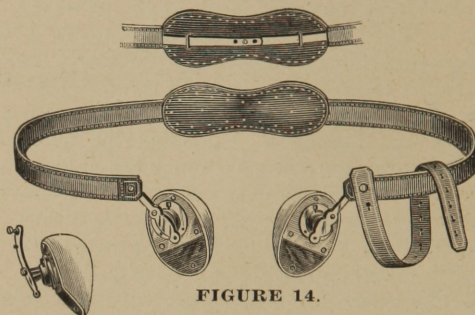


FIGURE 14.

Parker Retentive Truss, Double.

Gold-plate Pad, Plate, and Neck ; Silk Cover, Ivory Pad.

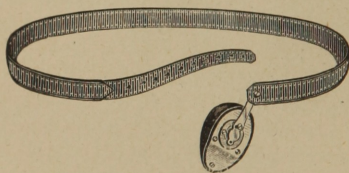


FIGURE 15.

Parker Retentive Truss.

Youth's Gold-plate Pad, Plate, and Neck ; Russia Calf Cover, Ivory Pad.

Sizes, 20 inches up to 30 inches.

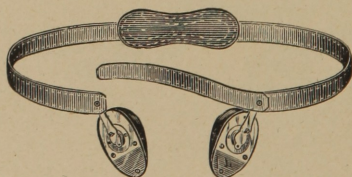


FIGURE 16.

Parker Retentive Truss, Youth's Double.

Gold-plate Pad, Plate, and Neck ; Russia Calf Cover, Ivory Pad.

Sizes, 20 inches up to 30 inches.

1st. The pad is formed to fit with the larger part upward, gradually lessening the pressure down toward the external ring, relieving the pressure from the bone entirely, therefore not interfering in the

least with the circulation of the blood through the spermatic cord, the dwindled tests soon regaining their former strength and vigor. If there was no other advantage gained by the "Parker Retentive Truss" other than relieving the pressure from the spermatic cord and pubic bone, we would accomplish many times the value of the truss

We should always seek to assist nature. Had the cord emerged from the abdomen immediately behind the external ring, few persons would be free from hernia, whereas, when the abdominal muscles are in action, the tendon and fascia behind the cord being pressed forward by the viscera, and that pressure being resisted by the external muscle, perform the part of a valve and more completely shut up the passage against the descent of the viscera. The "Parker Retentive Truss," giving the pressure over the internal ring, assists the external muscle and completely closes the natural valve. The external and internal muscles being pressed together, there is no opening to distend; on the other hand, by applying trusses at the external ring the opening becomes gradually distended, and the orifice becomes gradually larger and larger. Many ruptured persons can call to mind the time when their ruptures were very small, but have gradually increased in size, and yet they have always taken the precaution not to be on their feet without the protection of the truss. Such should not be the case. A rupture should always decrease in size when properly fitted; aye, the rupture cured, which almost invariably follows the use of the "Parker Retentive Truss," when properly applied, for the reason that the pressure of the pad is given at the spot where the hernial sac first quits the abdomen. The hernial sac having the quality of contracting, the rubbing or kneading action resulting from frequent change of position between the integuments firmly held by the pad and the walls of the abdomen, brings on an active contraction of the hernial sac at its mouth, closing it entirely, thus effectually preventing any protrusion of the contents of the abdomen. Dr. Lawrence, in his work on hernia, says: "The pressure of a truss excites slow inflammation and thickening both of the empty sac and the surrounding cellular substance, and thus assist and accelerate the contraction of the neck, and the separation of the sac from the peritoneum," therefore a complete cure of the rupture.

2d. The most important parts pertaining to a perfect truss, as shown, are the shape of the pad, direction of the pressure, and the spot where the pad is applied. As there are no two bodies the same in size, shape, &c., a truss, in order to be well adapted to different

persons, must have some adjustability about it to enable the person adjusting the truss to fit it as the particular case requires. This advantage is most perfectly obtained in the "Parker Retentive Truss."

The pad being attached to the arm or neck part by a ball and socket joint, admits of the pad being placed in any required position, or in other words will enable the pad to adjust itself to the shape of the body as perfect as if a cast had been taken of the parts—an admirable contrivance, and, so far, perfect; yet it will readily be seen that the joint would be useless in a truss, or worse even than no joint at all, could it not be controlled. It would adapt itself to the shape of the parts; it would at the same time accommodate itself to the condition of the rupture. Should the rupture press on one side of the pad more than on the other, the pad would yield to that pressure and allow the rupture to protrude; hence, what would be an advantage in the adjustment of the truss would be a positive disadvantage in the use or utility of the instrument.

Nature places the universal joint in various parts of the body, but in all instances under the control of muscles. The arm, one of the most useful members of the body, loses its usefulness when its socket joint moves without any control.

The successful inventor searches to the very bottom of his subject, and when a fault is found to exist he seeks a remedy. The arm of the truss pad in the "Parker Retentive Truss" has two holes near the pad, one above the other, either of which admits a screw, which passes through the arm and presses against the socket. This screw, in connection with the small set-screw passing through the socket and pressing against the ball, renders the socket joint absolutely immovable when required to be made firm. This arm screw is intended to fit into the upper hole, and when in that position the larger part of the pad is placed upward; the pad is then made fast in the new position—that is, giving the greater pressure at the very highest point at which it is found the rupture can be retained. I admit that this is a departure from the old rut, followed for centuries, of fitting trusses at the lower or wrong end of the rupture. Yet, if desired to fit in that way, the screw is withdrawn and placed in the lower hole; the pad is then turned half round, or so that the larger part of the pad is below. The pad has now assumed the position of the old style of trusses, farther than the prominence of the pad will hold a rupture more securely and with lighter pressure, a prominent pad losing no retaining power by the pressure being given where force is not needed.

3rd. After noting the locality where a truss pad should fit, the truss would be worthless unless it could be adapted so as to press at that particular locality. This object is obtained very perfectly in the Retentive Truss.

Dr. Parker's Retentive Truss,

Patented July 9th, 1878.

ILLUSTRATION AND EXPLANATION OF THE AUTOMATIC JOINT,

Patented March 6th, 1883.

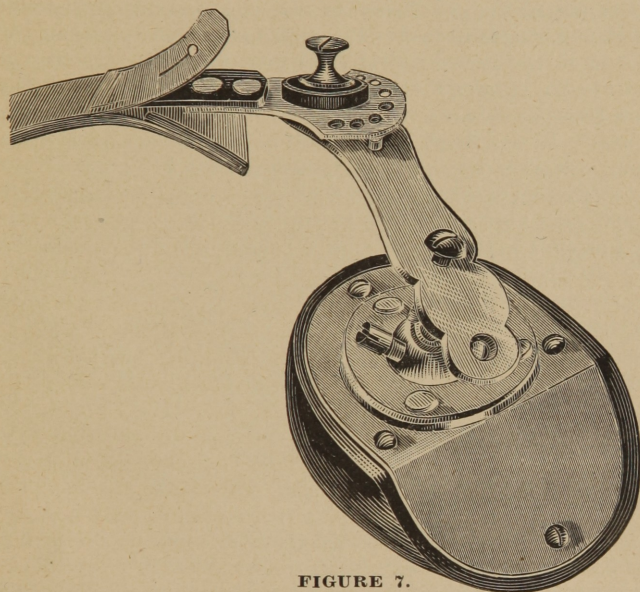


FIGURE 7.

The above full-sized cut (fig. 7) represents the AUTOMATIC JOINT, patented March 6th, 1883. The truss sheath or cover is slipped back from the end of the spring for the purpose of showing the joint. The arm of the truss pad is held firmly to the spring plate by means of a screw passing through a washer and circular piece of rubber, also through the spring plate, and screwed into the arm. The small stud projecting from the outer surface of the arm enters some one of the series of holes; the circular piece of rubber pressed between the washer and spring plate acts as a spring, and holds the arm firmly in

place. By holding the arm in one hand and the spring in the other, and using a little force to separate the arm from the spring plate, the stud is withdrawn, and the change is made almost like magic to any angle desired ; right or left, etc., without the use of a screw-driver as heretofore.

By referring to the above cut and explanation the reader will readily understand the mechanism of the peculiar joint. The truss pad can, by means of this joint, be made to fit almost any locality desired.

The neck of the pad should incline downward, and in about the angle of the inguinal canal. This object is secured by placing the small stud in the second one of the series of holes. The truss is changed for the right or for the left side by changing the pad to the opposite side, the stud entering either of the second holes from the outer edge. H. H. Bigg, in his work on Orthopraxy, says: "In reducing a rupture by the taxis, pressure must be applied in the opposite direction to that taken by the bowel ; and a truss approaches perfection most nearly when it is so constructed as to keep up a permanent pressure in the line or lines of action adopted in using the taxis." By placing the pad as directed the pressure is given similar to the pressure of the hand. The right hand is applied on the right side and the left hand on the left side. I am decidedly opposed to trusses that pass across the abdomen in order to fit right and left; the pressure is not given in the direction of the rupture, but rather draw the bowels toward the opposite side, and the tendency is to produce double rupture. One thing of which we can be positive is, that it is not consistent. The double trusses of the same style do not pass across the abdomen, and two principles, one directly opposite to the other, cannot both be right.

4th. The last, though not least important step in securing a proper truss, is the method adopted to secure the pressure needed to retain the rupture. The use of trusses for centuries has demonstrated the fact that a steel spring of the proper temper, shape, length, pressure, &c., is the only method of securing pressure that can be safely relied on in retaining a rupture.

The following quotation from H. H. Bigg's Orthopraxy says: "The earliest truss constructed for inguinal hernia was a broad band of leather or other material, which passed around the pelvis and secured a thick pad above the aperture through which the bowel protruded. Several attempts have recently been made to revive this form of truss, the only difference being the addition of an elastic

india-rubber strap beneath the perineum, the tension of which is extremely disagreeable, whilst, if it be loosely fastened, the hernia immediately escapes. It may have proved efficacious in relieving any small direct rupture or bubonocoeles, but it is an exceedingly untrustworthy arrangement. It is impossible to fix the pad so as to secure that degree of pressure upon the aperture of the protrusion in all the positions of the patient's body, which is necessary fully to restrain the rupture. It is a dangerous instrument, giving the appearance without the reality of relief.

"This crude arrangement was long the only form of truss which the surgeon could command, and the first attempt to improve upon its construction consisted in the substitution of a metal hoop, hinged, or so soft as to be flexible, for the pelvis bandage. No mechanical advantage was gained by this change, while the instrument was made more cumbersome and less easy to be worn.

"The next and crowning advance in the fabrication of trusses was the use of a steel spring in the place of the metal hoop."

Quoting Astley Cooper on hernia: "For this purpose bandages of different kinds, and elastic trusses, have been invented; but generally the instrument that can be most safely relied on is a truss of steel; other bandages often afford only a false security, more dangerous even than a total omission of this kind of support, since they encourage the patient to take violent exercise without apprehension of the probable consequences. An elastic steel truss, if properly made, and well applied, ensures the security of the patient during any degree of moderate exercise, and is no hindrance to any of the common occupations of life."

Dr. J. J. Woodward, Surgeon U. S. A., and compiler of the Medical History of the war, made the remark to the writer that he had examined all the works on hernia in the Medical Library at Washington, and failed to find a single work that did not use the word *dangerous* with reference to any truss securing retaining force for inguinal hernia by means of elastic belts or bands of leather, or other material strapped around the body.

There is no question about it; a steel spring is the proper method of securing pressure for a truss, but all steel springs are not what they should be. Trusses thrown on the market are largely made for the drug trade, and in order to compete they are frequently slighted.

By comparing the spring of the "Parker Retentive Truss" with the length of the usual springs on the market, as shown in cut

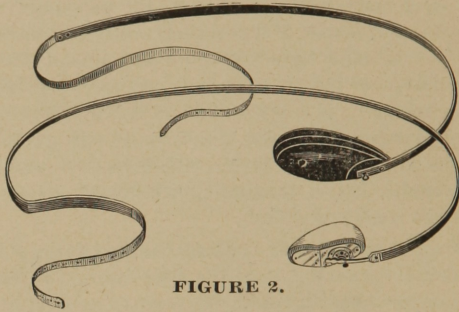


FIGURE 2.

(figure 2), it will be seen that the Retentive Truss of a given size is almost one-third longer than the other truss of the same size. The fact is, it is a very cheap and easy method of shaping a spring where they are short and not curved, besides requiring less material, but the utility of the truss is materially injured. The body is the same shape on one side as on the other, and a spring, to be a perfect one, should have the same curve on one side as on the other; thus the spring requires proper length and curve. Again, there are no two bodies the same shape. The springs of the Retentive Truss are so tempered that the shape of the springs are changed at will, by bending by force into the shape desired. The pressure is also changed by bending the spring outward or inward as the necessity of the case requires.

The spring of the "Parker Retentive Truss," when properly fitted to the body, cannot move from its place in movements of the body, no difference in what position. Should the spring change its position, it is evident that it is not properly fitted. The spring is encased in a silk sheath, that being the neatest, cleanest and easiest substance next to the person, and largely prevents the slipping of the spring.

The material and workmanship of a truss, if a good-fitting one, should be good. The pad of the "Parker Retentive Truss" is the best of ivory, an animal substance, natural to the body, hence less irritating, and admits of a fine polish and retains that smoothness for years. Of course it is expensive, but is it economy to put poor medicines into a prescription, or poor material in an instrument on which depends the comfort, health, aye! life of the patient? As to soft or padded truss-pads, they have had their day. The parts must become hardened and accustomed to the pressure by use. Were soft pads easier at first they would soon lose their shape, and by

absorbing the secretions from the body would become more and more an irritant—whereas the ivory pad keeps its shape, is always clean, and the parts become toughened and the truss pad perfectly easy.

The pad-plate and neck is of brass, gold-plated, hence we have the principal part of the truss composed of the best material for the purpose, and so connected with the spring as to be removed in a moment from that part, and attached to a new spring, should that part break or lose its retaining force.

The springs are made of the finest grade of English steel, yet a truss spring in constant use for two or three years will have become sprung outward in putting on and taking off two thousand times or more. Springs will naturally lose their elasticity. By attaching a new spring the instrument becomes as good as new. The silk sheaths are easily removed for washing or renewal as required.

One word as to the “Parker Retentive Double Truss” (illustrated, page 32). The principle of adjustment as to the front pads are exactly the same as in the single truss. Each spring passes around the body the same as the single truss spring, until they reach the centre of the back, being long enough only to lap a short distance, with a series of holes through each for the purpose of making the truss larger or smaller as desired, at the same time strengthening the truss where double trusses have always been the weakest. A well-shaped back pad is attached, which renders that part easy and comfortable after the patient has become accustomed to the pressure of the truss.

Directions for Ordering.

As an ill-adapted truss is a source of misery to the wearer and gives little security, it is not sufficient for the patient merely to order or obtain a truss. The fitness of the truss for the purpose, and its just adaptation to the individual case is one of the greatest importance. And I must say to the physician as well as to the patient, if it is possible for the patient to visit our office, it would be time and money well spent—where we have everything that could be needed constantly at hand for the different varieties of hernia, and the different conditions of each particular case, with the facilities of a factory at hand which is under the charge of our foreman of twenty years' experience; also facilities for making up special articles suitable for any peculiarities in a particular case. Again, Dr. Parker's experience has extended over twenty-two years, making the mechanical treatment of hernia a specialty. This knowledge and experience would certainly add materially to the value of the instrument.

Where it is not convenient for patients to reach us, we should then have as correct an idea of the case as possible.

1st. If not versed in the different kinds of hernia, give as good an idea of the location of the rupture as you can. If single, mention whether on the right or left side.

2d. Give about the size of the parts when protruded.

3d. The number of inches around the body in line of the rupture.

4th. Whether fleshy or lean.

5th. Have you had any difficulty in retaining the rupture?

Directions for Adjusting a Truss for Inguinal Hernia.

The "Parker Retentive Truss" is equally as well adapted to fit Oblique Inguinal, Direct Inguinal or Scrotal Hernia, and fits either right or left side.

First see that the truss is in the proper shape or position for the particular case. The truss fits on the same side of the body as the rupture. The truss-pad or neck of the pad should incline downward, with the stud entering the second hole on that side of the end of the spring. By reversing the arm or neck the truss is changed to the opposite side.

The most prominent part of the pad is placed upward, with the screw in the second hole from the lower end of the neck, the screw pressed firmly against the pad part.

The spring should fit well around the body, and be curved to fit the body closely. Should the pressure be too great, bend the spring outward.

Reduce the rupture thoroughly. Lie down if there is difficulty in reducing the rupture standing. Experiment until you find the very highest point at which the fingers will retain the rupture, and mark that point for the application of the pad of the truss. The pressure of the truss-pad should be above the pubic bone, at least. In case of a bad rupture, which is difficult to retain, an understrap with a loop can be slipped over the spring and placed well to the side and around the limb, attaching to the knob or pad-screw, which will prevent the truss from moving from its proper position. The pressure of the truss can be made as light as desired by bending the spring outward; there is no danger of breaking it.

A truss will be more or less uncomfortable at first; that is unavoidable. The essential point is to retain the rupture securely and

safely. The truss will become "as easy as an old shoe" by use. I suppose, had we never worn boots or shoes, it would be a serious ordeal to become accustomed to wearing them. The hands will become tender and sore—aye! blistered and raw, by the handling of tools until they become toughened by use. We cannot expect a truss pad which presses upon tender muscles to be an exception to the rule.

In case the parts become sore, place a fold of linen or soft material under the pad until the parts become hardened to the truss. Use *lapis caliminaris*, rubbing the dry powder over the parts irritated. Alum dissolved in water makes a good wash for the irritated parts, hardening and toughening the skin.

The same instructions apply to the adjusting of double trusses. The size in the double ones is changed by the screw in the back pad. The shape of the springs are changed to fit the body by bending, the pressure made lighter by bending the springs outward, &c.

Femoral Hernia.

The first symptom of femoral hernia is pain produced in the groin on straightening the limb, which extends to the stomach and produces nausea. An enlargement may be felt in the groin, which gives uneasiness on pressure. The first distinct external mark is a swelling of the part, easily reduced by pressure.

Femoral hernia follows the large artery and vein which passes down the limb and makes its appearance in the bend of the thigh. The opening where the enlargement makes its appearance is very accurately and nicely represented by the letters *x*, *y*, and *z*, Plate 1.

Figure 6, page 18, represents quite a large femoral hernia. The opening through which femoral hernia presses is of very small diameter, and the subject of it is in great and constant danger of losing his or her life by obstructions in the bowels more so than in other kinds of hernia.

Femoral hernia is most frequent in the adult female; very seldom in the male, and scarcely ever found in children of either sex.

Trusses for Femoral Hernia.

Cooper, in his work on hernia, says: "A spring truss is the only method of preventing the danger to which the disease exposes the sufferer." It is folly to attempt to retain femoral hernia with belt or elastic trusses. In fact, femoral hernia being but seldom met with, trusses for that kind of rupture have been almost totally neglected.

Inguinal trusses cannot be relied upon. In many years' experience in adjusting trusses, I have never found a truss that was adapted both to inguinal and femoral hernia.

The bearing of a femoral truss should be lower down than in inguinal, and the pad should rest in the hollow at the upper part of the thigh, and as the pad lies upon the crural arch, the motions of the thigh will have no tendency to displace the truss. This has never been accomplished outside of instruments adapted for the special purpose.

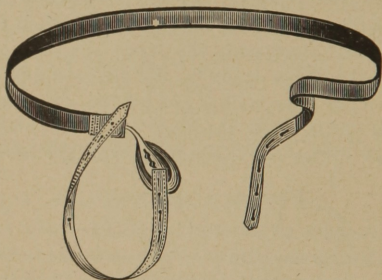


FIGURE 101.

Dr. Parker's Femoral Truss, Single.

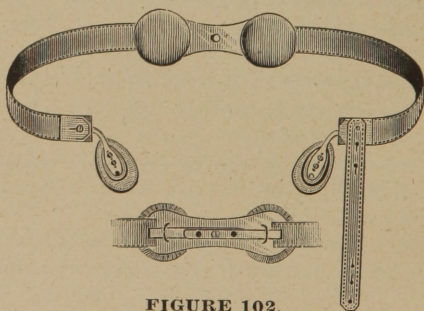


FIGURE 102.

Dr. Parker's Femoral Truss, Double.

The Parker Femoral Truss meets all the requirements necessary for retaining femoral hernia. The angle of the pad is brought more downward, and the malleable neck connecting the pad with the spring admits of still more of an angle, even to a right angle, if desired.

Again, by bending the neck inward the greater pressure is brought below the crural arch, as is usually required to retain femoral hernia, or the neck can be twisted or bent so as to fit the pad to the shape of the parts.

The pad of the Parker Femoral Truss is small, narrow and convexed, admitting of any movements of the limb without displacement. The slot in the neck allows the pressure to be brought as low down as desired. In case of an irreducible femoral hernia, as is often the case from not having a proper appliance, (a portion of the omentum or bowel becoming adhered or from other causes, producing this condition,) a cup-shaped or concave pad should be made for the special case. If properly made, it will, by its constant pressure, assist in reducing the rupture, and at the same time have a good effect in preventing strangulation. When the rupture is reduced the usual convex pad should be substituted.

In some instances a thigh strap is desirable. In that case, attach the strap to the knob at the lower part of the pad, and bring it around the limb and attach it to the same knob, or to the one at the end of the spring, as represented in figure 101, page 42.

The shape of the spring is a very essential part in a femoral truss. A double truss cannot be fitted across the abdomen, and it is not practical to fit a single truss across. The spring of the Parker Femoral Truss is fitted on the same side of the body as the rupture. The length of the spring from the pad to where it presses around the body is quite short when compared with an inguinal truss. The truss spring must be of the proper length and curve, and of such fine material and temper as to admit of a change to fit the body and regulate the pressure as desired. The spring being small, only a very light pressure is needed.

Umbilical Hernia.

At the navel there is an opening during life that will admit a common-sized goose-quill. If this opening were situated at the lower part of the abdomen, no person would likely be free from hernia. When any part of the contents of the abdomen is forced through this opening it is termed umbilical hernia or rupture. Its first appearance is about as large as the tip of the finger, and can be returned by a very slight pressure into the cavity of the abdomen. If nothing is done to prevent its growth it enlarges gradually to an enormous size, and produces a great deal of suffering and endangers life.

In case of fleshy persons, who are, in the adult, always more subject to umbilical hernia, the protrusion is often unnoticed or

neglected until there is quite a large protrusion, which, on being returned into the cavity of the abdomen, it is found the parts have accommodated themselves to the protrusion, leaving a space that will admit two or more fingers. It is evident this cavity must be filled and kept filled from the outside or the bowels will fill the space from the inside.

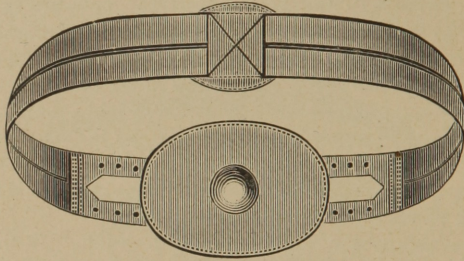


FIGURE 103.

Dr. Parker's Elastic Umbilical Truss.

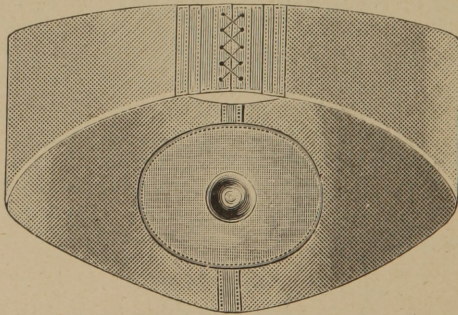


FIGURE 104.

**Dr. Parker's Silk Elastic Abdominal Supporter,
with Umbilical Pad.**

Dr. Parker's Umbilical Truss has a center part that can be separated from the truss pad in a moment and the proper size substituted, the centre being a fine polished wood pad. The other part of the pad is larger and somewhat concaved, giving support to the surrounding muscles. This part of the pad is usually leather-covered, lined with kid.

In case of an irreducible umbilical hernia, the centre part is removed.

The pressure can be obtained in various ways in case of umbilical hernia. Figure 103, page 44, represents the elastic truss. The pressure can be obtained by a spring as well. In cases of a pendulous abdomen, a silk elastic abdominal supporter answers two purposes admirably, one to support the abdomen, and (with the umbilical pad attached) retain the rupture at the same time, with a great advantage over other styles from the fact that the supporter prevents the displacement of the pad. Figure 104 represents Dr. Parker's Belt and Supporter.

Umbilical hernia is very frequent in infants. The same appliances, the elastic and spring trusses made small in proportion, are generally used.

Dr. Parker has found a new method of treating umbilical hernia in small infants. The appliance is very neatly made and easily applied, cannot slip or move, and invariably cures the rupture. The band is ingeniously connected with two plasters, one placed on each side of the navel, some distance apart, and when the bandage is fastened the plasters are brought together, bringing the skin and muscles together over the navel, preventing protrusion by closing the opening, the effect being an active contraction of the umbilical opening and cure of the hernia.

Directions for Ordering Umbilical Trusses.

In ordering the elastic belt and umbilical truss pad, give the number of inches around the body about two or three inches below the top of the hips, avoiding the fullness of the abdomen, again just about the same distance above the navel and again just over the navel.

- 1st. For an umbilical truss, give the distance around the body in line of the rupture.
- 2nd. Give about the size of the rupture when protruded.
- 3rd. Can the rupture be reduced?
- 4th. In case the rupture is returned into the cavity of the abdomen, will the opening admit one or more fingers?

A Word to the Ruptured.

We must look to the safety and comfort of our patients; we cannot risk the lives of our patrons by allowing them to be the sole judges of what their case requires. A Mr. K. from Barrington, Ill., called upon us to adjust a double truss. After examining the case, we selected a truss which, after being properly adjusted, could be re-

lied on to retain the rupture perfectly. Mr. K. persisted in the adjustment of another style of truss, remarking that we were "poor salesmen, as a good salesman would sell a man anything he wanted." We mentioned the fact that we would rather lose him as a customer than to adjust a truss we knew was not right for his case. Mr. K. ordered a truss through a druggist, which was worn but a few days, when the rupture became strangulated and failed to yield under the care of two or three physicians. A surgeon, called from Chicago, in operating, injured the spermatic cord, and it became necessary to remove the testicle. For several days after the operation there was little hopes of his living, but being a man of strong constitution, he finally recovered. As soon as able, Mr. K. came to us, willing to rely on our judgment as to what was required. Had we fitted such a truss as the gentleman wished in the first place, it would have been a hundred times more damage to us than the profits on the truss could possibly have amounted to

We did not lose a customer, but made a great many from parties warned of the danger they incurred by relying on imperfect appliances.

Commendatory Letters, &c.

RUPTURE POSITIVELY CURED.—The Parker Retentive Truss you fitted some three years ago has cured the rupture. I wore the truss a little over a year, and have not worn a truss since. My age is 75 years.

H. CHITTENDEN, 263 Ontario St., Chicago.

DR. PARKER—*Dear Sir*: I have been ruptured some 20 years on my left side. About two years ago you adjusted a Parker Truss, which cured the rupture. I am confident of the cure. Have not worn the truss for months, and yet became ruptured on my right side, the left remaining sound and well. My age is 55 years.

H. WOODRUFF, Residence 358 West Jackson St.
Chicago, Oct. 23, 1882.

DR. PARKER—*Dear Sir*: I am free to say I was discouraged when I called to see you. For ten months all truss adjusters had failed to hold my rupture, which was scrotal hernia, much larger than a goose-egg. Thanks to your superior skill and Retentive Truss, I now consider myself as sound as I ever was, not having worn a truss for more than a year, and often lifting in and out of wagons weights of 100 pounds or more. My age is 50 years.

L. S. HODGE,
August 25, 1882. Residence 549 West Jackson Street.

DR. PARKER—*Dear Sir*: After wearing your Patent Retentive Common Sense Truss for two years I find I am entirely cured, not

having worn the truss for months. My age is 78 years. Previous to your adjusting a truss I had great difficulty in retaining the rupture.

THOMAS CHANNEL,

Chicago, October, '83.

56 Huron Street.

CHICAGO, April 14, 1881.

DR. PARKER—*Dear Sir*: I suffered many years with a very large scrotal hernia, and found no relief from any truss I could find, until through your skill and new appliance you not only retained the rupture where others had failed, but have completely cured the hernia.

MORETZ HOFFMAN,

Residence 281 Fulton Street, Office 180 E. Washington St.

DR. A. H. PARKER—*Dear Sir*: In the year 1857 by an accident the abdominal walls of my abdomen were torn, the bowels protruding on the sidewalk. I was a great sufferer for years until you fitted a truss, which gave me relief and cured the rupture. I wear no truss, and am sound and well. Age 59 years.

ANDREW LAWSON,

Nov. 11, 1882.

711 West Madison Street, Chicago.

CHICAGO, March 17, '84.

Having been ruptured thirteen years, I found great difficulty in retaining the rupture until Dr. Parker adjusted one of his Retentive Trusses, which, within one year, has completely cured the rupture. My age is 59 years.

ROBERT HARVEY,

3015 Cottage Grove Avenue.

A gentleman from Chareton, Iowa, writes :

I am wearing the truss with perfect ease. I told you I would report to Dr. Gibbon, who, by the way, is an army surgeon, and is now the R. R. Surgeon of the C. B. & Q. R. R. for this district. Allow me to give you Dr. Gibbon's words : "Thank Dr. Parker for fitting out my friend Chase in such splendid order."

Mr. Brown, 144 Broadway, N. Y., writes :

I by chance saw one of your trusses, which was used by a young man ruptured during the late war : he said the government gave it to him. The truss had cured him and he had loaned it to several of his friends and it had cured them."

RUPTURE CURED ! \$5,000:—"Dr. Parker : I called to say to you I would not take \$5,000 for the benefit derived from the truss you fitted ten years ago. I wore the truss one year and there has been no sign of the rupture since.

W. H. T.

LESUEUR, Minn., Nov. 20, 1884."

From RANSOM DEXTER, A.M., M.D., LL.D.,

For twelve years Professor of Zoology, Comparative and Human Anatomy and Physiology in the University of Chicago; Member of the State Microscopical Society of Illinois, and of the Academy of Sciences; author of the famous book "The Kingdoms of Nature, or Life and Organization from the Elements to Man," etc., etc.

CHICAGO, ILL., Dec. 12, 1884.

Twelve years ago the Medical Board of the United States Army very justly adopted your COMMON SENSE TRUSS, for the use of the American soldiers and officers afflicted with Hernia, which act was endorsed by the best surgeons of this country. The truss as then devised was applied over the external abdominal ring, which would prevent the intestines passing that region.

Surgeons always desired a truss that would hold the bowels back in the abdomen by a pressure applied over the internal abdominal ring, but this has been found to be a most difficult thing to do.

Heretofore, truss makers have been unable to make a truss that would prevent the intestines passing the internal abdominal ring, on account of the depth and peculiarity of the opening, but in your new device (The Retentive Truss) you have succeeded perfectly. The best method, and we think the only scientific and safe way to cure an inguinal hernia is by closing the inguinal sack at the internal abdominal ring. Your new patent automatic joint, and improved pad fulfills all the indications desired, and when properly adjusted will hold the bowels within the abdominal cavity until a radical cure is effected.

RANSOM DEXTER.

The following is copied from the late Treatise on Hernia by Dr. W. T. Bogert, of Cincinnati, O., with regard to Dr. Parker's Retentive Truss:

"This truss fully presents all the attendant qualities that go to make it a perfect retainer, and no more effectual mode for the closing up of the Hernia orifices has ever been devised than the

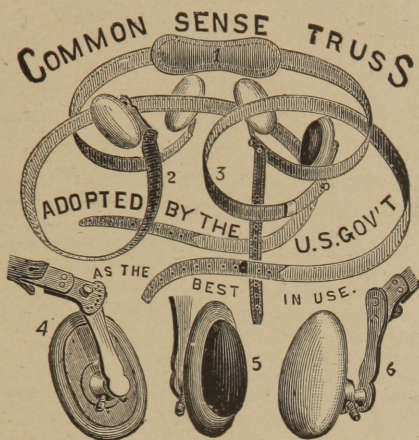
* * * * **Parker Retentive Truss,** * * * *

which combines lightness, cleanliness, durability, and readiness of adjustment. At once self-applicable, free from irritating pressure and meeting the expectations of the most sanguine.

"The hernia pad on its face is decidedly convex to a large degree, particularly at one end, where it presents a prominent base, which when used is applied uppermost, resting obliquely, in the line of the thigh, forming a complete shoulder or support—as it were—to that part of the over-hanging abdomen, by which it prevents any undue intestinal pressure upon the crifices, and yet made to act as a complete retainer by virtue of its spring.

"This truss from its inception is unique, overcoming all objections in other trusses, with proper set screws for its adjustment and under the absolute control of the patient. So much for this meritorious appliance, it being an innovation of surpassing excellence for which it is intended."

DR. PARKER'S IMPROVED



Automatic Joint patented March 6th, 1884.

Our having devoted so much space to the "Parker Retentive Truss," it being our latest improvement and a departure from the old idea of fitting trusses, must not lead the reader to think that that is our only style, which is not the case. Dr. Parker is President of the *Common Sense Truss Company*, one of the largest manufacturers of trusses in the United States, the variety manufactured amounting to over seventy different styles, many of them unequaled by any other makers. The "Parker Improved Common Sense Truss" has attained a world-wide reputation. In 1872, Dr. Parker presented his "Common Sense Truss" before a Board of Medical Officers in session in the City of Washington, organized in accordance with an act of Congress entitled "An Act to Provide for Furnishing Trusses to Disabled Soldiers," approved May 28, 1872. This Board was authorized to designate the style of truss "best suited for such disability." The Board being in session a number of days making a careful examination of the different styles of trusses, reported the following :

Extract from Report of Board of Medical Officers convened to examine samples of Trusses.

* * * "The Board is of opinion that the above principles (viz., those which belong to a proper truss,) are best carried out by the truss, samples of which were submitted by Mr. Parker of Chicago. * * * They are therefore recommended by the

Board as those best adapted, in their opinion, for the purposes indicated in the act of Congress entitled 'An Act to Provide for Furnishing Trusses, etc.'

BASIL NORRIS, Surgeon U. S. A., President.
J. C. ROSSE, Ass't Surgeon U. S. A., Secretary
J. J. WOODWARD, Ass't Surgeon U. S. A.
GEO. A. OTIS, Ass't Surgeon U. S. A."

"The above recommendation of the Board of Medical Officers is approved :
J. K. BARNES, Surgeon General U. S. A."

The *Washington Chronicle*, in reporting the proceedings of the Board, several days after being organized, says :

"All exhibitors of trusses are invited to appear before the Board either in person or by attorney. There are many different kinds of samples yet to be examined, some of them quite celebrated. The question as to which is the best is one of great interest, and the learned and scientific gentlemen who compose the Board are bringing to its decision the most careful and elaborate scrutiny. It is not soldiers alone who are to be affected by the decision of the Board. A vast outside hernia-afflicted army suffering from some of the inhuman instruments of torture called a truss will be governed to a great extent in getting new ones by what the Board may determine in regard to them."

As early as 1870, Moses Gunn, professor of Surgery, Rush Medical College, thus recognised the great merit of "Parker's Common Sense Truss":

"RUSH MEDICAL COLLEGE, June 15th, 1870.

"GENTLEMEN: I am acquainted with your truss, which you style the "Common Sense Truss," and am free to say that the instrument merits the term. The control of its Ball and Socket Joint by means of Set Screws, the malleability of its Spring, and the peculiar mechanism which attaches the Pad to the Spring, enables the Surgeon to fit the Truss in every particular with very great accuracy, without which no instrument, with whatever other merit it may have, can be efficient.
MOSES GUNN."

Since 1883 Dr. Parker has made very great improvements in the "Common Sense Truss" in the way of finish, material, and superior workmanship, and last but not least the Automatic Joint, patented March 6th, 1883, which has been attached to the truss.

It is a fact that a truss may have a fine appearance, yet the shape and adjustment of the spring or other parts be such as to render the truss of little utility as an appliance to retain hernia. The great reputation of Dr. Parker's "Improved Common Sense Truss" has called out some twenty different imitations. That of itself speaks highly of the truss. Its a poor bank whose bills are never counterfeited.

CAUTION.—There is probably no truss ever put on the market that has been so extensively imitated as "The Parker Common

Sense Truss," and as several unprincipled makers of trusses have made efforts to deceive the public with base imitations, we take this means of warning the ruptured against being deceived by these truss charlatans and their worthless goods. To avoid any mistakes in this respect, order direct from us and receive the *original Parker Improved Common Sense Truss*, with the late patented improvements. Each pad plate is stamped "Parker Common Sense Truss, Chicago." Neck of the truss stamped "Patented March 6th, 1883."

The Parker Improvements in Elastic Trusses.

Although the belt and elastic trusses have been tried more than two hundred years and have been discarded by the best faculty, yet there are some parties that adhere to the principle. The belt truss answering in small direct or incomplete hernia and admirable in case it is desirable to wear a truss at night.



FIGURE 23.



FIGURE 24.

Dr. Parker's Lever Elastic Truss and Abdominal Supporter.

The Lever Elastic Truss is an Elastic Band, united to an abdominal pad, of proper shape and construction to give a support to the abdominal muscles, with one or two adjustable rupture pads attached as the case may require for single and double rupture. Firmly

attached to the lower part of the abdominal pad is a graduated spring lever, the object of which invention is to overcome the objections which have always hitherto rendered the various so-called elastic trusses almost useless for retaining hernia. The effect of our Graduated Lever is to increase the pressure on the lower part of the abdominal pad, and at the same time bringing about an upward and inward support, thereby effectually preventing any escape of the rupture; this result is absolutely unobtainable in any other elastic or belt truss now before the public. The necessity for this invention was brought to our notice from our observation and experience in treating cases, and applying our "Common Sense Truss" to parties who had been more or less injured by wearing the ordinary Elastic Trusses. We found that a very large proportion were suffering with *prolapsus anni*, *prolapsus uteri*, kidney complaints, numbness of the lower limbs, habitual cold feet, and in not a few cases, almost a paralysis of the lower limbs—all from the fact that in order to even partially support their hernia, they had been obliged to strongly girt the belt around the body, the effect of which was to force the contents of the abdomen downwards into the pelvic cavity, bringing about the train of diseases enumerated. Our invention enables all who desire to wear an elastic truss to do so with perfect safety, and by simply removing the rupture-pad, they have in their possession an excellent abdominal supporter, alike adapted to male and female, but especially desirable for all cases of female weaknesses, and also for the support of corpulent persons.

Irreducible Hernia.

The nutrition and function of the parts in irreducible hernia not being materially arrested induces in the mind of the afflicted a false idea of security; the patient is constantly running the risk of some intestinal derangement, injury from blows, &c. I have, in cases of irreducible hernia, met with success beyond my expectation, in breaking up the adhesion by manipulations and rendering the hernia reducible, after which a well-fitting truss has retained the rupture perfectly. The following news report copied from the *Chicago Times*, May 12th, 1881, will illustrate:

"There has been considerable talk in medical circles over the marvelous work of a truss manufacturer on State street, who succeeded in reducing a large scrotal hernia, which for thirty years had been regarded as a hopeless case, by delicate manipulations of one hour each day for thirteen days. The patient is a member of the

Board of Trade, and for the past two or three years has suffered intensely from colicky pains with symptoms of strangulation."

Again, August 13th, 1881: "A patient at the Cook County Hospital, who lay helpless from scrotal hernia, was handed over to a truss manufacturer on State street, who by delicate manipulation, reduced the inflammation in less than an hour, and has his protegee walking about the streets. Warden Mills declares the operation a remarkable one."

The *Chicago Times*, in suburban news (Ravenswood) of January 31st, 1882, said: "Mrs. Bowen, who suffered for eight days with strangulated hernia, her life being nearly despaired of, was relieved in a few minutes through the efforts of Dr. A. H. Parker of Chicago, and is rapidly recovering."

Also from the *Oquawke Spectator* of August 16th, 1883: "Dr. A. H. Parker, of No. 58 State Street, Chicago, inventor and manufacturer of the "Common Sense Truss," devotes a large portion of his time to the fitting of trusses and reducing of severe cases of hernia. He is frequently called upon by persons suffering from what surgeons call irreducible hernia (except by the knife,) but he says he has never found a case that he did not succeed in reducing by manipulation alone. In our case (senior editor *Spectator*) which had been of long standing, we take great pleasure in saying, he was entirely successful."

In cases of irreducible femoral hernia, and also in umbilical and ventral hernia, we can many times make a concave pad of such size and shape as to give pressure over the protruded parts, preventing an increase of the enlargement, and assisting in reducing the size of the tumor, but is never safe or as satisfactory as when the rupture can be returned into the cavity of the abdomen and properly retained there. In the latter case the patient is as well as ever outside of the inconvenience of wearing a truss. But in cases of irreducible scrotal hernia some other appliance must be devised. In the latter case the most effectual I have found is to apply a sack something the size and shape of the parts, so arranged as to hold the weight from dragging downward. An additional advantage is gained by giving a pressure over the parts at the same time. All of which are effectually attained by

Dr. Parker's Elastic Suspensory Bandage, (Fig. 89.)

The advantages of the Parker Elastic Suspensory Bandage is largely in the shape of the sack part, and the material used in its construction. The shape is such that the parts rest in the sack in a

natural position, the weight of the tumor being supported by the band which passes around the body. In cases where the tumor is of large size and the weight to be supported is considerable, straps are

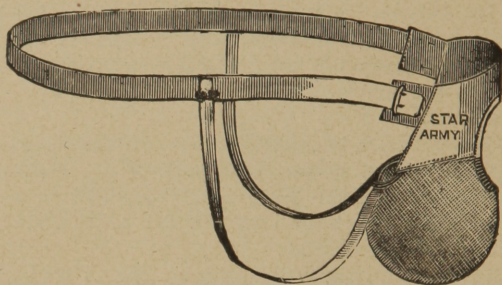


FIGURE 89.

attached to pass over the shoulders. The material of the sack is composed of threads of rubber wound with silk, and shaped in such a manner as to compress the contents of the scrotum, answering the purpose admirably in irreducible scrotal hernia, hydrocele, and in cases of large varicocele.

As the bandage will have to be made in most instances for the particular case, we should have measurements.

The following, among our numerous letters received from the Office of the Surgeon General's Department supplying appliances to pensioners, gives a very good method of taking measurements.

WAR DEPARTMENT,

SURGEON GENERAL'S OFFICE,

WASHINGTON, D. C., Dec. 18th, 1884.

DR. A. H. PARKER, No. 58 State St., Chicago, Ill.

Sir: I am directed by the Surgeon General to request you to send to this office, at your earliest convenience, one Silk Elastic Suspensory, with straps over shoulders, suitable for irreducible hernia, left side; measurements as follows, viz.: 1st. Perpendicular length of tumor from root of penis to lowest point, $9\frac{1}{2}$ inches. 2nd. Distance from root of penis to perineum over most depending point, $21\frac{1}{2}$ inches. 3rd. Greatest circumference of tumor, $20\frac{1}{2}$ inches.

Circumference of body, just below crests of ilium, 38 inches.

A suspensory was made by you for this case on an order from this office under date of April 8th, 1882.

Very respectfully,

Your obedient servant,

J. O. SKINNER.

Ass't Surgeon U. S. Army.

As to the suspensory bandages for varicocele, we manufacture a great variety in styles and prices, special pains being taken to make up a proper shaped and well-fitting bandage, good material, &c. The elastic we use can be put in boiling water without injury.

ELASTIC STOCKINGS.

An affection of the lower limbs, due to debility or weakness, and requiring proper support, is that known as varicose veins, or enlarged veins, originating in some impediment to the flow of blood from the lower extremities and a lax state of the parities of the veins. The blood not circulating freely becomes impure, the limbs swollen, and the impeded circulation brings on a diseased condition of the skin, which, if neglected, is soon followed by ulcers. The mechanical means required for their treatment consists in the application of an elastic support formed largely of india-rubber, the latter being completely covered in the form of elastic cord and woven on an elastic frame or loom, each course by measurements. The object of these appliances is to give a uniform support to the parts affected, but this is rendered impossible if an accurate fit is not obtained. It is a matter of surprise that *Elastic* stockings—upon the proper fitting of which the whole utility of the appliance depends—should so often be thrown into the hands of parties so little conversant with the application of these appliances, on which the proper circulation of the blood and the absorption of abnormal secretions depend.


H. H. Biggs, the English author, in the *Mechanical Treatment of the Human Frame*, says:


“Varicose veins are not, however, strictly confined to the lower extremities, but may exist in any other part of the body where obstructions to the venous circulation exists. Wherever they may happen to be, the mechanical means required for their treatment consists in the application of a silken elastic support, formed principally of india-rubber, to the varicose region; hence in the leg this takes the form of an Elastic Stocking, knee, ankle or thigh bandage, whilst in the trunk it has the shape of a belt or stays. Elastic bandages should always be constructed of the precise form of the region for which they are required; hence the custom of purchasing these appliances at the first druggist's or draper's that may happen to be near is most mischievous. I have constantly seen instances where not only considerable discomfort was caused by this procedure, but much danger to the health of the individual.”

Dr. Parker having had years of experience in applying and manufacturing Elastic Stockings, and the largest factory in the States, we are prepared to make up promptly from measurements. The patient will thus receive the goods fresh, and by purchasing

from first hands the quality is not cheapened to give a profit on the article to other dealers.

By following the explicit directions for measurements given there will be no difficulty in securing a proper fit:

 Follow the directions carefully. Goods made to order at the risk of purchaser. We can only correct at our expense where the error is ours.

 Give the exact measurement of the body taken loosely—We allow for expansion.

For an Anklet—Circumference at A, B, C—Length from sole of foot to C.

For a Garter Stocking—Circumference at A, B, C, C, D, E—Length from sole of foot to E.

For a Garter Legging—Circumference at C, D, E—Length from C to E.

For a Knee Cap—Circumference at E, F, G.

For a Knee Stocking—Circumference at A, B, C, D, E, F, G—Length from sole of foot to F.

For a Knee Legging—Circumference at C, D, E, F, G—Length from C to F.

For a Thigh Stocking—Circumference at A, B, C, D, E, F, G, H, I—Length from sole of foot to F, and from F to I.

For a Thigh Legging—Circumference at C, D, E, F, G, H, I—Length from C to F and F to I.

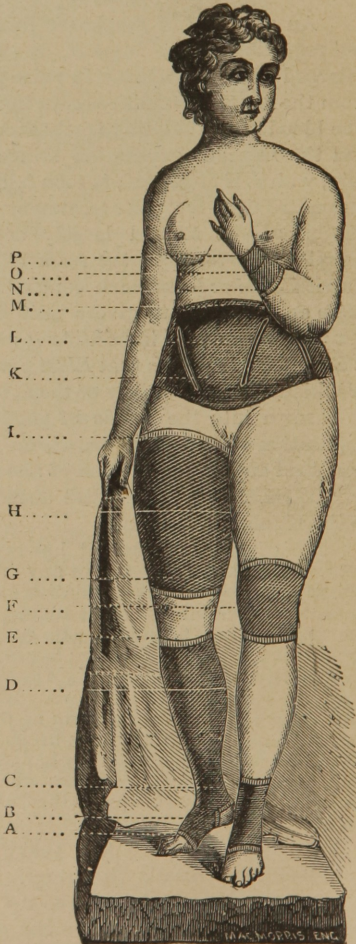
For a Thigh Knee Cap—Circumference at E, F, G, H, I—Length from F to I.

For a Thigh Piece—Circumference at G, H, I—Length from G to I.

For an Umbilical Belt—Circumference at the Navel.

For an Abdominal Belt—Circumference at K, L, M.

For a Wristlet—Circumference at N, O, P—Length from N to P.



In taking measurement of elastic stockings the length is too often neglected, leaving that matter for the workmen to arrange as best they can. A hose of a given size made for a tall man, should vary materially from one made for a person of short stature. Therefore, measurements should be given from the bottom of the heel to the garter, remembering that the stocking can not be made to stay to its place if made to reach above that point, unless it is made to fit above the knee. In case a stocking is required above the knee, then measure from the bottom of the heel to the knee joint, and from the knee joint to the top of the hose.

As the elastic clings to the limb, to avoid injury to the hose, care should be taken in putting them on. In the first place, turn the stocking, except the instep part, which should be drawn well over the instep, tuck a piece of paper under the foot part that will reach over the heel. By turning the top part of the stocking it will be found to pull over the heel smoothly and easily. The paper is taken out through the open part at the heel of the stocking.

The rubber used by the Common Sense Truss Co., is of a superior quality. Heat does not injure it, hence the stockings made of that material can be washed at pleasure. They may appear smaller afterward, yet it will be found to be so elastic that it can be handled as easily as ever; in fact, it is a very good way to make the size of the hose smaller at any given place by dipping that part of the hose in hot water, or holding it before the fire.

Elastic is injured by oil or grease. The stockings should be protected from salves, ointments, &c.

The treatment of varicose veins, and ulcers, also sprains, by means of pressure, which brings the blood into the natural channel and causes free circulation through the parts affected, has been recognized as the proper method of treatment for many years. The old method of securing that pressure was from strips of bandage wound tightly around the limb. This method required great care and experience to secure an even and equal pressure, difficult to keep in place, and was at its best an imperfect appliance. This method was improved by cutting and making out of some firm material a proper shaped stocking made to lace. This answered a better purpose. but was thick and cumbersome. Again the use of a shoe would prevent the lacings extending lower than the ankle, which in most cases would render their method subject to very serious objections. Although the bandage may support the veins where the pressure is given, the blood flowing in veins from the extremities upward, the bandage would form an obstruction which would enlarge the lower

veins. Thus while supporting enlarged veins at one place, would be the means of enlarging the veins below. If the laced bandage kept down the swelling of a limb, the foot and ankle would enlarge very much, even if there had been no swelling in that part previously.

There is a method which is in use to some extent and has been for years, that of using an elastic rubber roller bandage, which has some good qualities. The object in the treatment of varicose veins, swollen limbs, &c., is to get an even pressure over the parts. This can be secured by the elastic bandage if carefully placed by an experienced hand, but is subject to the same objection of the old method of bandaging. That is the trouble and difficulty of placing the bandage each time so as to give an even and proper pressure, an error in bandaging one time doing a damage that may take days or weeks to remedy. Another very objectionable feature is, the rubber confines the secretions, sweating and heating the parts. That alone should make the use of the elastic roller bandage one that should only be used temporarily, and replaced by a well fitting silk or cotton elastic hose as soon as convenient.

PRICE LIST.

Prices of the Superior Trusses, Bandages, and Elastic Stockings, Described in the preceding pages.

Dr. Parker's Retentive Truss, Ivory Pad, Gold Plated Pad Plates and Neck Enameled Spring, Silk Sheath; Patented July 9th, 1878, and March 6th, 1883. Single, \$14.00
 Same Style of Finish, Double, 21.00
 Directions for ordering, see page 39.
 Directions for adjustment, see page 40.

Dr. Parker's Improved Common Sense Truss, Gold Plated Pad Plate and Neck Enameled Spring, Silk or Calf Cover, Soft Cedar or Enameled Pad, Automatic Joints. Patented March 6th, 1883. \$6.00
 Same Style of Finish, Double, 9.00
 Youths' Common Sense Truss, Single, 3.00
 Youths' Common Sense Truss, Double, 5.00

Dr. Parker's Femoral Truss, Ivory Pad, Silk or Calf Sheaths, Single, \$8.00
 Same Style of Finish, Double, 12.00

Dr. Parker's Femoral Truss, Soft Pads, Silk or Leather Sheath, Single, \$5.00
 Same Style of Finish, Double, 8.00
 Illustrated—see figures 101 and 102, page 42.

In cases where cup shaped pads are needed, we can only give prices after we receive some description of the case, enough to enable us to form an idea of about what is required.

Dr. Parker's Lever Elastic Truss.

This Truss is Fine Finished, Material Extra Quality, Single \$5.00
 Same Style of Finish, Double, 6.00
 Illustrated page 51.

Dr. Parker's Improved Umbilical Truss, Elastic Web, Silk
Finished, \$6.00

See Figure 103, page 44.

Directions for ordering, page 45.

Dr. Parker's Improved Silk Elastic Abdominal Supporter,
with Umbilical Pad, made to lace behind or buckle at the side ;
finished in fine white calf skin, lined with shamois skin. All
the material used is of the best quality, \$14.00

See Figure 104, page 44. Directions for Ordering, page 45.

Dr. Parker's Improved Silk Elastic Abdominal Supporter,
same style of finish but without Umbilical Pad. Medium and
small sizes, \$10.00

Large size in proportion to size, \$10.00 to 12.00

See Figure 1, page 56.

Dr. Parker's Elastic Suspensory for Irreducible Hernia,
Hydrocele &c. For directions see Figure 89, Page 34. As the
sizes vary so much and are made for each particular case, price,
will vary from \$4.00 to 6.00

We manufacture a large variety of Suspensories, prices ranging
from fifty cents up. By sending the amount you wish to pay, sta-
ting the belt measure around the body, and whether the sack
part is required large, medium or small, we will select the best
Suspensories for the amount, and forward by mail. We can only
give the prices of a few of extra quality.

Dr. Parker's Improved Suspensory, extra quality, silk sack.

The sack part large and shallow, giving a good support. No. 00 \$2.50

Dr. Parker's Improved Suspensory, silk. No. 0. 1.50

Dr. Parker's Improved Suspensory, No. 1. 1.25

Dr. Parker's Improved Suspensory, No. 2. 1 00

Dr. Parker's Improved Suspensory, Linen, No. 3.65

Dr. Parker's Improved Suspensory, Cotton, No. 4.50

Price of Dr. Parker's Silk Elastic Stockings.

Dr. Parker is making a superior Stocking, especially for his
retail customers. The seam commences at the side of the foot and
tapers around to the calf, leaving the heel free from any seam. The
seams are lined with shamois skin, the binding an extra quality.
More silk and a better quality is used than any other hose on the
market.

Dr. Parker's Silk Elastic Anklet,	\$2.50
Dr. Parker's Silk Elastic Garter Hose,	4.00
Dr. Parker's Silk Elastic Garter Legging,	3.00
Dr. Parker's Silk Elastic Knee Cap,	2.50
Dr. Parker's Silk Elastic Knee Stocking,	6.00
Dr. Parker's Silk Elastic Knee Legging,	5.00
Dr. Parker's Silk Elastic Thigh Stocking,	10.00
Dr. Parker's Silk Elastic Thigh Legging,	8.50
Dr. Parker's Silk Elastic Thigh Knee Cap,	6.00
Dr. Parker's Silk Elastic Thigh Piece,	4.00
Dr. Parker's Silk Elastic Wristlets, from	1.00 to 1.50

Directions for measurements, see figure 1, page 56.

Address

Dr. A. H. PARKER,
58 State Street,
Chicago, Ill.



From a clinical lecture delivered by Prof. E. Andrews, M. D. on "Fossil Trusses," and published in the Journal of the American Medical Association, of February 21, 1885, we extract the following:

A very excellent instrument is furnished by the United States government to ruptured soldiers. It is made in Chicago by Dr. A. H. Parker, under the trade name of "Common Sense Truss," and extensively sold to patients. (See Fig. 8.)

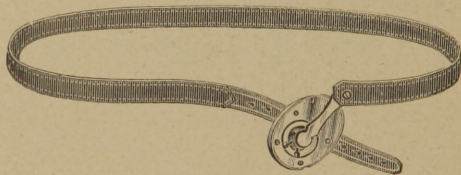


Figure 8.

It consists of a steel spring, covered with a strong woven sheath, which is generally silk. The sheath terminates in the usual leather strap to fasten in front. The pad is of ivory or other smooth material and carried on a short arm, which can be set in different directions so as to fit the patient and change the instrument for use either with a right or left Hernia. The pad is articulated with a ball and socket joint, fixed with a set-screw. The temper of the steel admits of being bent to fit the form without breaking.

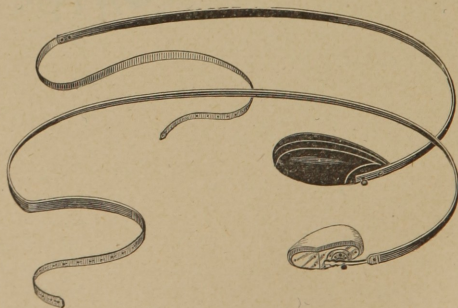


Figure 2.

The length of the spring is somewhat greater than in most trusses as shown in Fig. 2, where the upper one is of the common kind. The increased length of the lower one fixes it more steadily on the hips. It is a very excellent truss.

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